UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,893	07/24/2003	Thinh Nguyenphu	59643.00269	1188

32294 7590 02/18/2009

SQUIRE, SANDERS & DEMPSEY L.L.P.
8000 TOWERS CRESCENT DRIVE
14TH FLOOR
VIENNA, VA 22182-6212

EXAMINER	
ZEWDU, MELESS NMN	

ART UNIT	PAPER NUMBER
2617	

MAIL DATE	DELIVERY MODE
02/18/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/625,893	NGUYENPHU, THINH	
	Examiner	Art Unit	
	Meless N. Zewdu	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 November 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15,32,37 and 40-62* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-15,32,37,40-45,47-55 and 57-62* is/are rejected.

7)☒ Claim(s) *5, 46 and 56* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Remarks

1. This action is in response to the communication filed on 11/12/08.

2. Claims 16-31, 33-36 and 38-39 have been cancelled.

3. Claims 60-62 have been added.

4. Claims 1-5, 32, 35-37 and 40-62 are pending in this action.

Claim Objections

Claim 37 is objected to because of the following informalities: on line 14, the phrase "said release link in response to such a further" needs to be changed into --- said data communication link in response to said further ---. Appropriate correction is required.

Claim 41 is objected to because of the following informalities: a comma (or ,) should be inserted on line 11, next the phrase "a message" . Appropriate correction is required.

Claim 42 is objected to because of the following informalities: on line 3, a communication link" needs to changed, into --- a data communications link ---. Appropriate correction is required.

Claim 42 is objected to because of the following informalities: on lines 5-6, the phrase "one condition comprising a condition" is confusing. Appropriate correction is required.

Claim 42 is objected to because of the following informalities: on line 8, the unnecessary line, preceding the word 'generating' should be deleted. Appropriate correction is required.

Claim 60 is objected to because of the following informalities: the phrase "such detection" on line 12, needs to changed, into said detecting ---. Appropriate correction is required.

Claim 62 is objected to because of the following informalities: "a communication" on line 4, should be changed into --- a data communication ---. Appropriate correction is required.

Claim 62 is objected to because of the following informalities: "at least one condition comprising a condition", on lines 6-7, is confusing and vague. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 41 recites the limitation "the wireless interface", the mobile"" in respectively lines 3 and 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 42 recites the limitation "release said data" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 15, 32 and 42 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Although various elements of a network are cited as passive participants or respondents, there is not mentioning of an active system/apparatus that performs the steps recited in the claims in question. According to the recent memorandum issued on May 15, by the Deputy Commissioner of Patents, John J. Love, a method/process claim must (1) be tied to another statutory class (such as a particular apparatus) or (2) transform underlying subject matter (such as an article or materials) to a different state or thing in order to qualify under 35 USC § 101.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 9-15, 32, 37, 40-43, 50-53 and 60-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Komandur et al. (Komandur) (US 2003/0137948 A1) in view of Manning et al. (Manning) (US 6,580,699 B1).

As per claim 1: Komandur discloses a system, comprising:

at least one access network (see fig. 1, element 115) configured to provide a wireless interface between a mobile device (element 125) and the at least one access network (element 115) for communication of packet data (see title; abstract; paragraph 0032);

a core network comprising at least one core network node for supporting communication of packet data on the wireless interface (see paragraph 0032); and

a controller (see fig. element 110) provided in association with the at least one access network (element 115), and configured to monitor at least one condition associated with the wireless interface (see paragraphs 0045, 0059, 0064), and when the monitoring indicates that the at least one condition is met (see paragraphs 0045 and 0059-0060). But, Komandur does not explicitly teach about the recited feature that reads as – configured to release a data communication link associated with the mobile device in the absence of a response to one or more messages directed to the mobile device and to generate and send to the core network node one or more messages in response to one or more of said one or more messages from the core network node. However, in the same field of endeavor, Manning teaches that a base station detects the absence of an existing R-P connection between itself and a PDSN for providing packet data services and wherein once a new R-P connection is completed, a PDSN

(core node) sends an R-P connection release message to the old base station to release the old R-P connection and receives a confirmation message from the old base station (see col. 4, lines 30-54, particularly lines 40-44). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Komandur with that of Manning for the advantage of timely switching or updating an R-P connection when a MS roams into a new radio network (see col. 1, lines 59-61).

As per claim 2: Komandur teaches a communication system, wherein the controller/local server/ is configured to monitor a condition associated with signal strength on the wireless interface (see paragraphs 0045, 0060, 0064). an access network determines that a mobile is unreachable based on signal strength.

As per claim 9: Komandur teaches a communication system, wherein the core network node comprises an access gateway (see fig. 1; paragraph 0004). Block 120 must have a gateway to access the network (110).

As per claim 10: Komandur teaches about a communication system, wherein the access gateway comprises a packet data support node (see fig. 1; paragraphs 0030-0033).

As per claim 11: Komandur teaches about a communication system, wherein the controller is provided in a base station controller (see fig. 1; block 110; paragraphs 0010-0011, 0032).

As per claim 12: Komadur teaches about a communication system, wherein the controller is provided in a packet function associated with the access network (see paragraph 0046).

As per claim 13: Shibata teaches about a communication system, wherein the controller is configured to respond to messages that are sent to the mobile device on behalf of the mobile device (see paragraphs 0052-0055).

As per claim 14: Komandur teaches about a communication system, wherein the controller is configured to send a notification regarding the status of the wireless interface in response to a message from the core network (see paragraph 0045). Mobile reach-ability is a status data.

As per claim 15: the features of claim 15 are similar to the features of claim 1, except claim 15 is directed to a method comprising the steps to be performed by the system of claim 1. In other words the steps of claim 15 are required for the system of claim 1 to perform its intended function and the system of claim 1 is required so as to perform the steps of claim 15. Hence, claim 15 is rejected on the same ground and motivation as claim 1 since the method is required by the system.

As per claim 32: the features of claim 32 are similar to the features of claim 1, except, in response to receiving the notification (of the mobile being out of reach), retaining said data communication link but pausing from sending further data packets from the core network to the mobile device, which is taught by Komandur (see paragraphs 0045; 0049); and processing the data packets in accordance with a predefined policy, taught

by Komandur (see abstract), wherein congestion control and avoidance can be considered as a data packet processing policy.

As per claim 37: the features of claim 37 are similar to the features of claim 1, except detection means for detection at a controller provided in association with the access network that at least one trigger condition associated with the wireless interface is met, which is taught by Komandur (see paragraphs 0045, 0049, 59, claim 1). Any of the conditions in Komandur's reference, i.e., the mobile being out of reach or/and lost packets, can be considered as triggering conditions. Furthermore, the core network postponing/delaying the release of said release link in response to such further message is also taught by Komandur (see paragraph 0045).

As per claim 40: the features of claim 40 are similar to the features of claim 1, wherein the first sending unit is the paging source and the second sending unit is the response source that includes the intermediaries (BSC or BSS or BS), as provided by the combined references. Furthermore, regarding the at least one trigger conditions associated with the wireless interface, the packet data that indicates that the mobile is unreachable (paragraphs 0045-0046) or the time out priority (paragraphs 0049, 0059) could be considered as trigger condition since the claim does not say what is being triggered. Therefore, claim 40 is rejected on the same ground and motivation as claim 1.

As per claim 41: the features of claim 41 are similar to the features of claim 1, except generating and sending a response message on behalf of the mobile device, which is taught by (see col. 7, lines 44-52); and postponing release of said data communication

link which is taught by Komandur (see paragraph 0045). Therefore, claim 41 is rejected on the same ground and motivation as claim 1.

As per claim 42: the features of claim 42 are similar to the features of claim 41, except claim 42 is directed to a method comprising the steps required to be followed by the apparatus of claim 41. Hence, since the method is required by the apparatus and the apparatus is obviated by the combination of references discussed in claims 1 and 41 above, claim 42 s rejected on the same ground and motivation as claim 41.

As per claim 43: the feature of claim 43 is similar to the feature of claim 2. Hence, claim 43 is rejected on the same ground and motivation as claim 2.

As per claim 50: the feature of claim 50 is considered as similar to the feature of claim 41, as indicated by the phrase therein. Thus, since the features of claim 41 are obviated by the prior art of record, claim 50 is rejected on the same ground and motivation as claim 41.

As per claim 51: the claim is directed to a packet control function associated with the access network comprising an apparatus according to claim 41. Thus, claim 51 is similar to claim 41, except the packet control function. However, the prior art of record, Komandur in particular, teaches a re-transmission control in wireless packet data networks (see title), which obviates the packet control function recited in claim 51. Therefore, claim 51 is rejected on the same ground and motivation as claim 41.

As per claim 52: as indicated by the phrase, "according to claim 41", claim 52 is similar to the feature of claim 41. Therefore, claim 52 is rejected on the same ground and motivation as claim 41.

As per claim 53: the feature of claim 53 is similar to the feature of claim 2. Hence, claim 53 is rejected on the same ground and motivation as claim 2.

As per claim 60: the features of claim 60 are similar to the features of claim 15, except claim 60 is directed to a computer program embodied on a computer readable medium and intended to perform steps of method claim 15. Thus, since the steps of claim 15 are obviated by the prior art of record, the computer program must be an obvious feature within the embodiment of the prior art. Therefore, claim 60 is rejected on the same ground and motivation as claim 15.

As per claim 61: the features of claim 61 are similar to the features of claim 32, except claim 61 is directed to a computer program embodied on a computer readable medium and intended to perform steps of method claim 32. Thus, since the steps of claim 32 are obviated by the prior art of record, the computer program must be an obvious feature within the embodiment of the prior art. Therefore, claim 61 is rejected on the same ground and motivation as claim 32.

As per claim 62: the features of claim 62 are similar to the features of claim 42, except claim 62 is directed to a computer program embodied on a computer readable medium and intended to perform steps of method claim 42. Thus, since the steps of claim 42 are obviated by the prior art of record, the computer program must be an obvious feature within the embodiment of the prior art. Therefore, claim 62 is rejected on the same ground and motivation as claim 42.

Claims 3, 8, 44, 49, 54 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to claims above, and further in view of Aalto (6,041,235).

As per claim 3: the above references do not explicitly teach about a controller monitoring the signal strength of uplink link layer, as claimed by applicant. However, in the same field of endeavor, Aalto teaches that a base station (which is a controller) monitors the level and quality of the signal (uplink signal) that is served by the base station (see col. 1, lines 2244). For the advantage of performing handover procedures when the monitored signal indicates that the quality of the signal at the current cell is low (see col. 1, lines 36-44).

As per claim 44: the feature of claim 44 is similar to the feature of claim 3. Hence, claim 44 is rejected on the same ground and motivation as claim 3.

As per claim 54: the feature of claim 54 is similar to the feature of claim 3. Hence, claim 54 is rejected on the same ground and motivation as claim 3.

As per claim 8: Aalto teaches about a communication system, wherein the controller (BS) is configured to monitor pilot signals from the mobile device (see col. 1, lines 33-44). The uplink signal from the mobile terminal to the base station and monitored by the base station is a pilot signal. Motivation is same as provided in the rejection of claim 3 above.

As per claim 49: the feature of claim 49 is similar to the feature of claim 8. Hence, claim 49 is rejected on the same ground and motivation as claim 8.

As per claim 59: the feature of claim 59 is similar to the feature of claim 8. Hence, claim 59 is rejected on the same ground and motivation as claim 8.

Claims 6, 47 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to claims above, and further in view of Ahmavaara et al. (Ahmavaara) (US 6,792,278 B1).

As per claim 6: the above references do not explicitly teach about a communication system, wherein the controller is configured to monitor a condition associated with paging of the mobile device, as claimed by applicant. However, in the same field of endeavor, Ahmavaara teaches about creating a paging database in a suitable network node (like in RNC) wherein the RNC receives (monitors) a page response message from a paged mobile device using the paging information created in the paging database (see col. 2, lines 14-67; col. 3, line 65-col. 4, line 29; col. 4, line 48-col. 5, line 4). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references with the teaching of Ahmavaara for the advantage of reducing signaling need for the establishment of data connection (see col. 2, lines 14-18).

As per claim 47: the feature of claim 47 is similar to the feature of claim 6. Hence, claim 47 is rejected on the same ground and motivation as claim 6.

As per claim 57: the feature of claim 57 is similar to the feature of claim 6. Hence, claim 57 is rejected on the same ground and motivation as claim 6.

Claims 4, 45 and 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to the respective claims above, and further in view of Sivalingham (US 7,154,903 B2).

As per claim 4: the references applied to the claims above do not explicitly teach about a condition that comprises expiration of a timer, as claimed by applicant. However, in the same field of endeavor, Sivalingham teaches about a packet control function (fig. 1, element 18) communicatively coupled with a BSC and a PDSN, wherein the PCF, in response to receiving data for a dormant mobile terminal, starts a reactivation timer to set a time within which the mobile must establish connection with the network (see at least the abstract). It is to be noted that the PCF is coupled with the radio access controller (BSC) and thus can be considered as in the service of the controller. Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references with the teaching of Sivalingham for the advantage of managing networks that maintain dormant or inactive packet data session for mobile terminals (see col. 1, lines 7-10).

As per claim 45: the feature of claim 45 is similar to the feature of claim 4. Hence, claim 45 is rejected on the same ground and motivation as claim 4.

As per claim 55: the feature of claim 55 is similar to the feature of claim 4. Hence, claim 55 sis rejected on the same ground and motivation as claim 4.

Claims 7, 48 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over the references applied to the respective claims above and further in view of Lim (US 2002/0057658 A1).

As per claim 7: the references applied to the above claims do not explicitly tech about a controller that is configured to monitor re-registration message from the mobile device, as claimed by applicant. However, in the same field of endeavor, Lim teaches about a packet data network wherein a controller a node (BSC/PCF, periodically renew (thus monitoring) registration by the registration request message (paragraph 0015). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to further modify the above references with the teaching of LIM for the advantage of releasing a radio packet link of an old packet control function (see paragraph 0022).

As per claim 48: the feature of claim 48 is similar to the feature of claim 7. Hence, claim 48 is rejected on the same ground and motivation as claim 7.

As per claim 58: the feature of claim 58 is similar to the feature of claim 7. Hence, claim 58 is rejected on the same ground and motivation as claim 7.

Allowable Subject Matter

Claims 5, 46 and 56 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: within the context of the preceding claims, the prior art of record does not teach

or fairly suggest configuring a timer to expire before the expiration of a message, as recited in claims 5, 46 and 56.

Response to Arguments

Applicant's arguments with respect to claims 1-15, 32, 37 and 40-59 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meless N. Zewdu whose telephone number is (571) 272-7873. The examiner can normally be reached on 8:30 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bost Dwayne D can be reached on (571) 272-7023. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Any inquiry of a general nature relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

/Meless N Zewdu/

Primary Examiner, Art Unit 2617

2/18/2009